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ABSTRACT

A study of unmet student financial need in Washington State was conducted by the Washington Council for Postsecondary Education. "Unmet need" is the difference between need and the total amount of aid received by the student through federal, state, and institutional financial aid programs, privately funded scholarships, and nonsubsidized student employment, both on- and off-campus. While the focus was a core group of full-time in-state undergraduates who completed the school year at the same institution, attention was also directed to those who did not complete the year at the same college. There were 20,768 students in the core group in 1983-1984 who had an annual per student average unmet need of about $2,500. An analysis of core group students with very high unmet need produced a profile that suggests that such a typical student is likely to be female, older than 24, enrolled in a community college, an independent student, have a low family income, and receive little or no parental support. Students at private colleges and community colleges had the greatest amounts of unmet need. Additional analysis divided the students into three categories: dependent, independent with no children, and independent students with children. Technical notes on data file creation and definitions are appended, along with a sample record layout worksheet. (SW)

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UNMET STUDENT FINANCIAL NEED IN THE STATE OF WASHINGTON

A Study Of The "Need Gap"

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UNMET STUDENT FINANCIAL NEED IN THE STATE OF WASHINGTON

--A Study Of The "Need Gap"--

Robert Fenske
James Hearn
Denis Curry

April, 1985

This document reflects the research results of the Council's study of financial aid resources and unmet financial need in Washington. It does not contain policy recommendations of the Council and any conclusions or opinions expressed herein are those of the authors.

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-- Denis Curry
April, 1985

UNMET STUDENT FINANCIAL NEED IN THE STATE OF WASHINGTON

--A Study of the "Need Gap"--

EXECUTIVE SUMMARY

This study of unmet student financial need is one of the most comprehensive conducted by any state. Aided by experienced consultants, the Washington Council for Postsecondary Education developed a master file of all individuals who applied for and/or received student financial aid in the State of Washington in 1982-83 and 1983-84. By matching College Scholarship Service applicant data with Council-collected recipient information, over 80,000 records were created for each year. Each record compared family and student resources plus student financial aid received from all sources to the cost of attendance at the respective colleges and universities. After excluding individuals with less than $200 in financial need and non-resident applicants who did not receive financial aid, the study found that in 1983-84, 68,020 students or applicants had unmet financial need of slightly over $200 million. Approximately $90 million of this total was associated with the 18,000 Washington residents with financial need who applied for, but did not receive, financial aid.

In computing unmet financial need, certain standard definitions and calculations were used.

> "Cost" is the sum of tuition and fees plus standard allowances for books and supplies, room and board, personal expenses and transportation. The allowances were based on budgets adopted by the Washington Financial Aid Association and varied based on student living arrangements and whether the student was married and/or had dependents. The 1983-84 cost of education for a single, resident, full time student living away from parents and attending a major public university was $5,838.

"Need" equals "Cost" minus "Total Expected Family Contribution" as calculated by the College Scholarship Service in accordance with the uniform methodology system of needs analysis. In the case of dependent students, family contribution includes a proportion of parents income and assets as well as an expected student contribution including a proportion of assets and the full value of available benefits (e.g., veterans benefits, public assistance, etc.). For independent students, both their own and their spouse's (if applicable) income and assets are applied against the cost of education.

"Unmet Need," the focus of this study, is the difference between "Need" and the total amount of assistance received by the student through federal, state and institutional financial aid programs, privately funded scholarships and non-subsidized student employment, both on- and off-campus.

Because the findings of the study could have a bearing on state policy and budgetary decisions, the analysis focused on those student categories for which there was complete and reliable data and which were of policy significance. Ultimately, greatest attention was directed to the "core group" of full-time resident undergraduate students with unmet need who had completed the school year at the same institution. A parallel analysis was also conducted covering full time resident undergraduates who did not complete the full school year at the same institution.

There were 20,768 students in the core group in 1983-84 who had an annual per student average unmet need of approximately $2,500. Analysis of the core group data yielded several findings, including:

1. Unmet need represents a large and growing gap between costs and resources for an increasing number of postsecondary students in Washington.

2. Unmet need is by no means spread uniformly among students. For some students the gap is so large that it can be logically surmised to be a deterrent to timely completion of programs, the ability to stay in school, or to return if discontinuance is necessary.

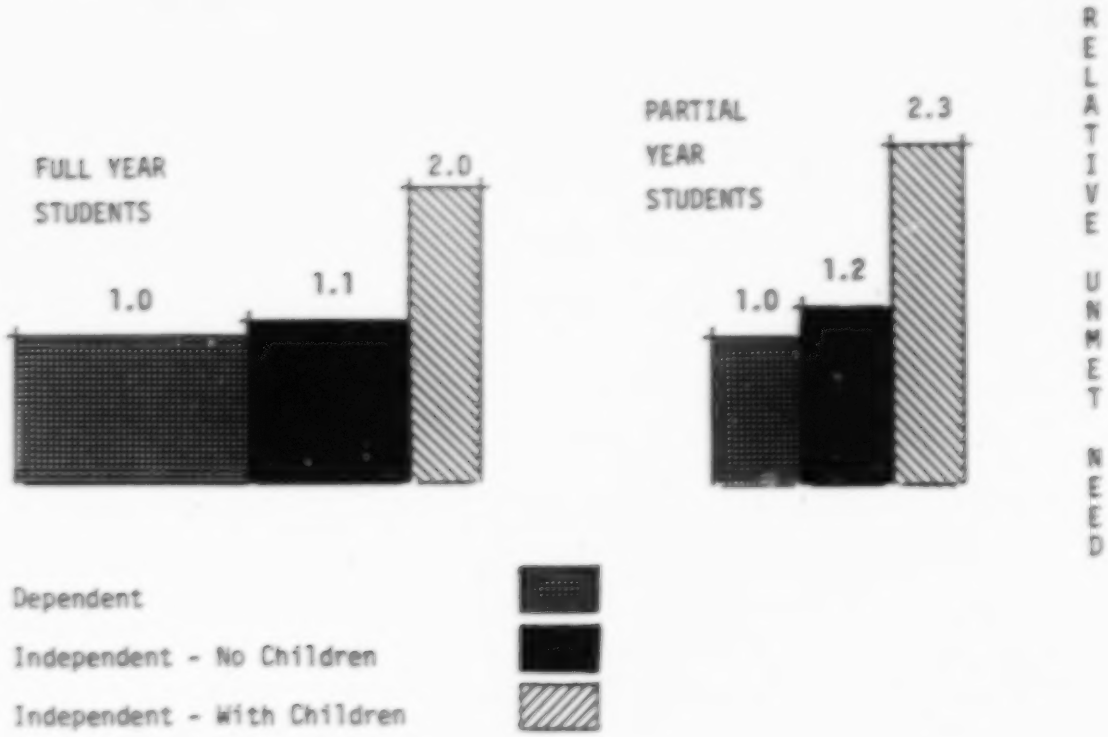
3. The notable variance in background characteristics of students according to differing levels of unmet need suggest that targeting of ameliorative strategies could effectively offset the worst effects of unmet need. This study went far in identifying the types of students who seem to be impacted most severely.

In regard to the latter finding, a special analysis of core group students with extremely high unmet need produced a profile that suggests that such a typical student is likely to be a female, older than 24, enrolled in a community college, an independent student, have a low family income and receive little or no parental support. In addition, as the review of the core group by dependency status suggests, the typical student with high unmet need also has at least one dependent child.

The analysis of students with high unmet need provided an insight into why community colleges, along with independent colleges and universities, had the greatest amounts of unmet need. In the case of the latter institutions, which receive no direct state support, the high cost of attendance (over $10,000) and the resource constraints and maximum limits of financial aid programs are the main reasons for high unmet need. In the much lower cost community colleges, the substantially greater numbers of older students with dependent children, coupled with lower financial aid availability, appears to be the main reason.

An analysis by dependency status was also made which divided both the core group and the partial year students into three categories: dependent, independent with no children, and independent students with children. Although the latter group represented only 16 percent of the core group, the unmet need of those students was nearly double the average of the other two groups. Tables VIII through XIII and the tables in Appendix Two of the report provide a full range of characteristics of the respective groups. While the three dependency status groups were distributed proportionately among ethnic categories, the independent students with children were more than twice as likely to be female than male and were nearly five times as likely to be older than 24 years of age. About 60 percent of all such students were enrolled in community colleges.

The following chart illustrates the relative unmet need of the three groups for both the core group (full year students) and partial year students. The unmet need of dependent students is equalized to 1.0. The horizontal dimensions of the chart indicate the relative size of the three groups.



The analysis of the students who did not complete the school year not only indicated a higher unmet need for independent students with children but also that these students had the lowest persistence of any of the groups studied. Only 55 percent of aided undergraduates with children completed the year compared with 65 percent of other independent students and nearly 75 percent of dependent students.

Overall, the partial year group had a somewhat higher level of unmet need, was older and consisted of a higher proportion of females, minorities, and community college students than the core group. This analysis indicates that consideration of special targeting strategies to address the "stop-out" or "drop-out" phenomenon is warranted.

While the study yielded many highly significant findings, it also raised many questions and revealed additional avenues for further, perhaps even more significant, research which should be conducted in the future.

-- In the case of residents who applied for aid but for whom no aid was reported. Who are they? Why did they not receive aid? Were they prevented from even enrolling in a Washington college or university because of an extensive unmet need gap?

-- For those students who only attended part of an academic year, was their unmet need the main reason for their inability to complete the full year? For how many, and what kinds of students, was this true? To what extent were academic and personal factors involved?

-- In the case of students who completed the year, what strategies did they use to cope with unmet need? Did they receive additional support from families? What elements of cost were cut? What effect, if any, did the degree of unmet need have on choice of academic field or ability to continue in future years?

-- Longitudinal analysis is needed, and should be possible in the future, to address questions of "down-shift" to lower priced schools related to unmet need and variations of unmet need over time.

The study concludes: *It would be tempting to reach specific conclusions solely on the basis of this review. However, all of those involved in this study are aware that further follow-up analysis is needed to determine the extent to which the provision of adequate student aid would affect an apparent heavy stop- or drop-out pattern among certain groups of students. Of immediate concern are individuals with dependent children, primarily older female students. The study clearly demonstrates that special needs exist in this area and that none of the existing student financial aid programs makes special provision for the unique needs of this group.*

1. BACKGROUND AND NEED FOR THE STUDY

The Western Region of the United States has generally subscribed to the tradition that while both society and the individual benefit from higher education, society is the principal beneficiary. A corollary of this tradition is that society benefits by governmental efforts to provide residents of the state with access to a reasonable choice of higher education institutions, and the means to achieve their educational goals. The State of Washington has supported this tradition by two principal means: (1) It has provided many types of low-tuition publicly supported institutions of higher education in various regions of the state, and (2) the state has developed student financial aid programs which have the general purpose of assisting "...needy and disadvantaged Washington residents in obtaining a postsecondary education...."[1]

The philosophical premise of state-supported student financial aid in Washington is as follows: "While the cost burden of a student's postsecondary education is primarily a parental or personal responsibility, no Washington resident should be denied access to a postsecondary education because of financial inability to sustain the cost of obtaining such an education."[2] Furthermore, freedom of choice of college has been maintained by making grants, loans and work opportunities available for students to attend a wide range of postsecondary institutions in Washington, including two- and four-year public colleges and universities, independent colleges and universities, public vocational-technical institutes and many proprietary schools in the state.

In student financial aid, the State of Washington is in a partnership relation to the federal government and also to private and institutionally-funded sources. The role of the last of these sources has been relatively minor. Over recent years and for the short-term future, private and institutionally-funded student aid comprises one-fifteenth of the grand total of student financial aid provided in the State of Washington.[3]

The federal government has been the dominant partner in providing student aid since the early 1970's. As is true for the entire country, federal student aid comprises well over 80% of the total available in Washington.[4] Of the various federal programs, the Guaranteed Student Loan (GSL) program has grown in recent years to become the largest. At present, the GSL program provides slightly over half of the total dollars awarded in Washington. The various campus-based federal programs provide another one-fifth and the Pell Grant program has held steady at about 15% of the total.[5]

The role of state-funded student aid programs administered by the Council for Postsecondary Education, while comprising a minority of the total dollars, should not be underestimated. These programs are flexible and are aimed specifically at the needs of Washington residents. For example, the Washington State Work Study program responds specifically to the needs of both Washington students and their employers. Furthermore, as the federally funded College Work Study program has declined in funding based on real (inflation adjusted) dollars, the State Work Study program has grown to fill the breach. In 1975-76, the second year of operation of the state's program, the ratio of federal work study dollars to state dollars was 9 to 1.[6] The federal program has grown less than 10% in the last six years, and thus has lost considerable ground to inflation over this period. The state program has grown to meet the relative decline in federal dollars and during the current academic year has a ratio of about one-third of the total work study dollars in the State of Washington.[7]

The state grant program has also expanded since the early 1970's to help meet the needs of Washington residents. This expansion has helped to compensate for the overall decline in federal student aid, especially since 1980. The American Council on Education recently pointed out that the decline in constant (inflation adjusted) dollars in federal aid between 1980 and 1984 amounted to an average of 19% over all programs.[8] Thus, there has been a considerable loss in "buying power" of the federal aid that has only partly been offset by the growth in Washington state programs. Furthermore, tuition in both the public and independent colleges and universities in Washington has increased very rapidly as

have other costs to students such as books and supplies, room and board, transportation and other expenses. These two factors (decreased real dollar federal financial aid and increased costs) have resulted in a substantial increase in what might be called the "need gap" in which students have been provided with relatively fewer dollars to meet the escalating costs of their college education.

Maintaining Access for Low-Income Students. Low-income students, many of whom are racial or ethnic minorities, have always been the target groups of most of the government financial aid programs which have been initiated at the state and federal level. This is evidenced by the fact that almost all of the dollars provided have been need-based; that is, financial aid has been provided to make up the difference between the financial resources of the student and his or her family and the costs of education at the college of choice. While it is very clear that access has been greatly improved for low-income students over the past fifteen years, it is also quite clear that the job is far from finished. All things being equal (for example, academic ability and motivation) students from the lowest-income families have still been participating at a lower rate than those from middle and upper-income families.

On the national scene, almost one-fourth of all white youth graduate from college. While the graduation rate for students of Asian background is near that of whites, it is only about one-half that rate for Black youth and for other minorities it is only half the rate for Blacks (7% for Hispanics and 6% for American/Alaskan Natives)![9] The continuing, relatively low college-going rate is a matter of special interest in the State of Washington because census and other demographic data indicate that racial and ethnic minorities comprise the fastest-growing segment of future college age cohorts in the state.

In Washington, students from upper and middle-income families have participated at a high rate in postsecondary education. It is assumed that state government will continue to be interested in pursuing policies that will maintain these rates and will also "level-up" the participation rates of low-income groups. The fairly rapid rises in tuition and other costs to students will hamper low-income student participation rates in

Washington. The "other costs" of out-of-pocket expenditure and foregone income impact low-income youth more than others. It is most unlikely that massive loans (the fastest-growing type of financial aid at the federal level) will be a satisfactory solution.

The costs of education in Washington's institutions have risen rapidly and increased tuition and fees are in response to such cost increases. In addition, the share of costs borne by students has increased in the public institutions. For a balanced perspective, however, the concept of cost of education to the student should be kept in mind as one considers the growing gap of unmet need. Tuition and required fees are only one aspect of costs to students. The student also has out-of-pocket costs including room and board (or continued support by the family if the student continues to live at home), books and supplies, work or school related travel and other living costs. Only in rare instances would all of these costs be covered by grants or scholarships. Most students meet a good share, or even most, of these costs from their own resources (family, savings, and work), or by loans, with payments beginning very soon after graduation or discontinuance for any reason. Finally, foregone income must be considered. For students from low-income families, this is a major consideration. Often such families must strongly rely on income that can be earned immediately after the student's graduation from high school. To forego four or more year's earnings in such instances is not a trivial matter.

The Need to Study Aggregate Unmet Needs - Recent studies have shown that nationally slightly over half of all students graduating from college received some form of student financial assistance.[10] This statistic is not necessarily a logical basis for complacency, however. The drop-out rate continues high in all sectors of postsecondary education, and there is very little research on students who are discouraged from even enrolling in an institution of their choice because of their personal unmet need gap. Furthermore, it can be assumed that the relative inadequacy of sufficient student financial aid has restricted freedom of choice of college, especially for low-income students. Many such students are diverted to the lower-cost colleges such as the public community colleges because of the unmet need gap. But how many? And how many are prevented

from participating in higher education at all? And, how many are forced to drop out temporarily or even permanently discontinue progress toward a degree? Studies to answer these questions are difficult, time-consuming and expensive.

Need can be defined as the difference between a student's cost of attendance and the amount that the family and/or student can contribute toward the educational cost. Unmet need is the amount that remains after the family contribution and all aid resources are subtracted from the academic year college cost budget. It is logical to assume that unmet need has differential impacts on students according to their individual financial circumstances. For example, different levels of financial need can be identified within the aid recipient population. Examining the impact of increases in unmet need for high-need students can provide information concerning the possible effect on access and retention for aid recipients. Students who have relatively low financial need often have the availability of assistance through loans and employment to resolve their modest financial needs and allow them to pursue their education. Students who have moderate to high financial need levels may well choose not to attend or to leave the institution because their needs so far out-reach their resources. Currently, moderate to high-need students who are borrowing to the maximum program limits and working the maximum number of hours have no further options for resources to meet their increased unmet need gap. It becomes important to evaluate closely these moderate to high-need students as any increase in unmet need, even one of a minimal nature, could shift them out of the population able to meet their educational expenses with available aid.

While it is appropriate to focus on the problems of the low-income, high-need student, it should be emphasized that the growing unmet need gap affects a wide range of students. Institutional aid officers try their best to shift discretionary funds to students with the highest demonstrated need. However, these ameliorative strategies, in turn, create other problems when federal and state funds are shifted to meet the increased unmet need gap of the high-need student since this can eliminate funding formerly available to the lower-need (for example, low-middle income) students. Most typically, these lower-need students

are dependent and come from families with moderate incomes. With the combination of the reduced availability of student aid funds and higher costs of attendance, it becomes evident that the impact of unmet need on students can affect a very wide population. In the near term future, no substantial increases are foreseen in federal programs. It is therefore likely that funding will be available to a smaller number of students because those who are determined to be eligible and have high need levels will require a larger percentage of the total funds than in the past.

Rationale for the Study - Unmet need may affect student enrollment and persistence decisions in several ways. A packaged student aid offer containing insufficient funds may discourage high school graduates from ever enrolling. The older prospective student may also be discouraged from beginning or returning to postsecondary education. Less dramatically, an inadequate student aid offer may cause students to change their institutional destination from first choice institutions to a less costly, but less desired alternative. Unmet need may also cause enrolled students to drop out, or to take on levels of outside employment and loans that seriously hamper their chances for an academically productive and well-balanced college career. The quest for limited funds results in many forms of student aid being fully allocated (and usually over-allocated) many months before the school year starts, requiring total reliance on entitlement programs which fall far short of meeting needs. Thus, the question of unmet need is significant, indeed, it is becoming a central concern for postsecondary policy in the current era of state and federal fiscal constraints.

The staff of the Council for Postsecondary Education (CPE) conducted a preliminary study of unmet need in the State of Washington during the 1983-84 academic year.[11] They found that the constraints in recent years on federal appropriations for student aid have not been sufficiently offset by increases in state-funded programs. Even though total state expenditures for student aid doubled from $7.5 million in 1979-80 to $15.8 million in 1982-83, Washington still provided only about half the national average in aid appropriations per full-time student in the latter year.[12] The Council staff noted that minority student enrollment in Washington had decreased in recent years and that there had been a

dramatic increase in both number of total aid applicants with need and in total dollars of financial need (for example, the calculated amount of total financial need of aid applicants increased 14% from 1982-83 to 1983-84). The study noted that research follow-up was needed, particularly to identify the financial components of the unmet need gap, to identify the categories of applicants/recipients who have large unmet need and to identify the differential impacts of unmet need on the entire population of aid recipients in the State of Washington. In the latter part of 1984, the Council authorized a research project to address the issues raised in the preliminary study and their relationship to state policy issues. This paper reports the results of that research.

2. METHODOLOGY

Unmet need is simply the shortfall in available aid, that is, the difference between total student financial need as calculated by a standard need analysis formula and the total aid awarded. The generally accepted definition of need is the difference between the cost of the college of choice* and the financial contributions of the student and his or her family. A small minority of aid applicants have been awarded enough aid to meet their calculated need, but in the aggregate unmet need has always existed because there has never been sufficient funding to eliminate financial barriers to college access for all who wish to attend. One reason for the insufficiency of funding has been that increases in availability of student aid have evidently provided access to many students who otherwise would not have considered attending because of lack of finances. However, more recently, student aid appropriations by the federal government (the major partner in providing funds) have failed to keep pace with the expectations the programs helped create. As indicated in Chapter One, increases in Washington State funding have substantially offset the decline in federal student support. Nonetheless, significant rises in overall costs to students to attend college have combined with student aid funding stringencies to increase the unmet need gap.

It is unlikely that the need gap will be eliminated in the near term; the state's finances are simply not sufficient to achieve such a goal. Neither is there likely to be a move toward eliminating state-financed student aid, especially in the present climate of declining federal support for student aid and proposed reductions in expenditures for this purpose. Student aid is an ongoing element of higher education, and at the state level, is likely to grow. However, the unmet need gap will also be a continuing phenomenon. The findings and conclusions of this study suggest that unmet need impacts certain categories of students much more than others. Consequently, increased "targeting" of aid would seem to be called for. Studies such as this can provide

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* For the purpose of this study, unmet need for those actually attending was calculated using the cost of the college attended.

a factual basis for improving the effectiveness of Washington state student aid and alleviating the harshest effects of high levels of unmet need for many students.

Research Design.

This study had the very considerable advantage of utilizing large data bases. This advantage provides (a) reliability of the findings, (b) the potential for a disaggregative approach, and (c) presentation of cross-analyzed distributions, rather than reliance on summary statistics. The disaggregative approach is particularly advantageous in targeting certain subgroups and categories of students who exhibit different levels of unmet need.

The success of the research depended most heavily on the quality of its indicators of Total Costs, Student Resources, Parental Contribution, Student Aid, Need and Unmet Need. The researchers constructed uniform indicators of Costs and Resources instead of relying solely on the Financial Aid Form Needs Analysis Report (FAFNAR) data which are subject to institutional variation. The following formulas were used:

I. Need = Total Costs - Student Resources - Parental Contribution
II. Unmet Need = Total Costs - Student Resources - Parental Contribution - Total Student Aid

(See the Technical Note appended to this report for detailed description of each of the indicators used in the above formulas.)

Data Bases.

This study utilized a special working student record file hereinafter designated as the Master Analysis File (MAF), that contained all necessary and relevant data for analysis. This section describes the content and development of the MAF, along with certain related topics.

The procedure for creating the data analyses for the 1982-83 and 1983-84 cohorts consisted of three major steps:

Step 1: Merging Key Data Sources into the MAF - Students who received aid during the fiscal year (e.g. 1982-83) for attendance at a Washington postsecondary institution (and were thus included on the Council's Unit Record Report (URR)) and/or whose completed aid form indicating a Washington institution which was processed by the College Scholarship Service were included in the MAF. This resulting population comprises the known aid recipients and needy applicants in the state.

Step 2: Ensuring Discrete Student Records within the MAF - Student records of the URR and CSS files were matched by student social security number (SSN). The record created contained all the necessary information for conducting the analysis of unmet need. See the Technical Note for a copy of the record layout. For those student records for which there was no match, the data to fill the newly created student record came from either the URR or CSS information. Conceptually, three groups were represented in the MAF: (a) Those students with a match of URR and CSS data, (b) students with only URR data, and (c) students with only CSS data. An indicator was included in the record which identified which one of the three groups each individual belonged to. Prior to analysis, the URR file was checked for exact duplicate records. Where any existed, one of the student records was deleted.

Step 3: Manipulating MAF Data to Create Specified Reports - The reports used in the project were created by manipulating the MAF using SAS programming language prepared by Council staff to produce reports as specified by the study team.

Data Analysis.

Distribution of unmet need was calculated as follows. The amount of unmet need for each student record as described above was computed for the total student record population and various subgroups of that population as described in Chapter 3. The calculated amount of unmet need for each student record was the unit of analysis for this study, and is analogous to the dependent variable in an experimental type of study. Therefore, it was important to divide this distribution into the optimum set of categories that enabled useful analyses by background and financial

variables. A trial run was made of the cross tabulations to determine whether or not the initial set of categories was optimal for the actual distribution of the unmet need variable for the MAF. The initial distribution was modified after projecting its utility for further analyses and the following distribution was used for most of the analyses described in the following chapter: 0 - $1000, $1001 - $2000, $2001 - 3000, $3001 - $4000, $4001 - $5000, $5001 - $7500, more than $7500.

The analytical strategy used was disaggregation. As detailed in the following chapter, gross univariate distributions were created including the largest number of appropriate student records in the MAF. Then cross-analyses were employed to determine the effect of background (independent) and circumstantial variables on the distribution of unmet needs. The univariate distributions are described where they are presented in the following chapter.

The following list of cross-analysis variables were comprised of categories as indicated:

1. Type of Aid (Grant, Loan, Work)
2. Source of Aid (Federal, State, Institution, Other)
3. Type of College (according to standard format of CPE)
4. Year in School (Freshman, Sophomore, Junior, Senior, Unclassified, Graduate/Professional)
5. Dependency Status (Dependent, Independent)
6. Age (standard age brackets were used)
7. Sex (Male, Female, Other)
8. Race (standard CSS/URR definitions were used)
9. Family income (standard URR categories of adjusted gross incomes were used)
10. CSS filing date (two-fold categories of earliness or lateness in applying were used)
11. Family Contributions (standard brackets of family contributions were used)

The original study design did not call for any additional analyses beyond the cross-analysis review of the various student categories. How-

ever, as the analysis proceeded, it became of special interest to develop a "profile" of the "high unmet need" student. In particular, it was of interest to determine whether certain classes or definable subgroups of students were typified by high levels of unmet needs. Additional data runs were therefore made to explore this question.

3. THE FINDINGS

The Master Analysis File developed for this study contained 81,233 student records for 1982-83 and 85,726 for 1983-84. Results are reported in this study for the 73,373 individuals in 1982-83 and the 76,462 applicants or students the following year whose financial need was above the $200 threshold.

The total amount of unmet need aggregated across all student records in the Master Analysis File and based on data in that file was $266,390,000 in 1982-83 and $277,645,000 in 1983-84. As Table I indicates, when the unmet need of non-aided non-residents is excluded and when adjustments are made for unreported Guaranteed Student Loans and in calculations for partial year students, remaining unmet need totals $195,150,000 in 1982-83 and $201,807,000 in 1983-84. Large as these figures are, the total dollar amount probably understates the actual total because the information necessary to determine precise unmet need for many of the various types of students is unavailable, incomplete or involves conjecture. In addition the unmet need in this study applies only to those who were known applicants and/or recipients of student financial aid.

Because the findings of this study may form the basis for state policy and budgetary decisions, the researchers chose to focus primary analyses on those student categories for which there is complete and reliable data and which are of policy significance. As will be shown, the students in these categories have aggregate amounts of unmet need that are large. But the extent of unmet need was not the criterion for detailed analysis, rather, the criterion was the reliability and policy significance of information for resident, full-time undergraduate students with unmet need who attended the same institution for the full school year. These students comprise about one-fourth of the total on the MAF. This means that this group is not to be necessarily construed as necessarily representative of the total group; they are not a random sample of the larger group, simply a segment which is of policy importance and where minimal conjecture on unmet need calculations exist. Therefore, allocation patterns of student aid and unmet need distributions should not be assumed to be reflective of the entire group of aided students.

To reach this group of students, several decisions were required:

First, the decision was made to arbitrarily exclude all students who were calculated to have less than $200 of need from the analysis on the grounds that this amount, while certainly not trivial to many students, is not an insurmountable problem for almost all students. Thus, while these student's records were included in the MAF, they were not part of this analysis. This decision allowed the researchers to reduce the costs associated with computer analysis and concentrate on a presumed "at risk" population.

Second, students included on the MAF because they were originally part of the CSS file, but who were non-residents and not recorded as having received aid at a Washington postsecondary educational institution, are on the MAF but not included in the analysis. These prospective students, while indicating an interest in a Washington institution, do not represent a policy significant group in a study of unmet need.

Third, the approximately 20,000 Washington residents applying for aid but for whom no aid was reported are of policy significance. However, further research is needed on the extent that lack of student aid prevented prospective students from attending; the extent to which some financial aid (most likely Guaranteed Loans) was received and not reported; or the extent to which these individuals attended school out of state. Until this is done, considerable elements of conjecture on the extent of unmet need exist. Once a representative core of non-aided students can be established, however, profitable in-depth analysis can be conducted.

Fourth, all non-residents receiving aid were excluded since there may be a question as to the appropriateness of their unmet need being a problem for the State of Washington. However, their unmet need and the financial aid they received is included in the aggregate study.

Fifth, the proprietary and vocational-technical institute (VTI) sectors were excluded because of both under-reporting and substantially different rates of reporting by these institutions in the two years covered by this study.

Sixth, those students for whom no or negative unmet need was shown were excluded because of probable revisions to financial circumstances subsequent to initial filing of FAF information and since the intent of this study is to examine unmet need and not need which has been met.

Seventh, all non-undergraduate students (unclassified, graduate/professional) were excluded from the opening discussion because of (a) their ineligibility for many forms of aid; (b) the unknown extent of interaction with graduate assistantships; and (c) questions of self-exclusion suggested by the small number of students (under 2,000) in the category.

Eighth, only full-time students were included in the initial discussion on the philosophical premise that the marked demographic differences and financial situations of part-time students render them somewhat incomparable with full-time students for analysis purposes. In addition, a major question exists as to the extent student financial aid should be responsible for assisting with the non-direct costs of attendance for part-time students. Of further concern is the extent to which they were "part" time for purposes of accurate cost calculation. Therefore, while this group of resident undergraduate students is of policy significance, too many questions exist to include them in the area of in-depth analysis.

Finally, the large number of students (approximately one-eighth of the total MAF records) who did not receive aid for the full academic year at the same Washington institution were treated as a separate subset in the discussion because of difficulties of accurately estimating unmet need based on costs incurred at different colleges during differing terms (semesters versus quarters). Findings for these students will be discussed later in some detail because of important policy implications.

Having "peeled off" layers of student records comprising more than three-fourths of the total MAF, the core group that remains will now be described and their unmet need will be analyzed. This group of students (hereinafter denoted the "core group" for purposes of brevity) are those who were full-time, Washington resident undergraduates at the same

TABLE I. Levels of Unmet Need: Master Analysis File to Core Group, 1982-83 and 1983-84.

	1982-83		1983-84	
	# Students	Unmet Need	# Students	Unmet Need
Master Analysis File - All Students With Greater Than $200 Financial Need	73,373	$266,390,000	76,462	$277,645,000
Non-WA Residents - Not Aided	6,642	$ 43,169,000	6,383	$ 44,245,000
WA Residents Reported As Not Aided but with GSL's *	1,916	$ 5,147,000	2,059	$ 5,505,000
Adjustment in Calculation of Need for Part-Year Students	--	$ 23,924,000	--	$ 26,088,000
Adjusted Total	64,815	$194,150,000	68,020	$201,807,000
WA Residents - Not Aided	17,397	$ 80,126,000	18,314	$ 90,069,000
(Subtotal)	(47,418)	($114,024,000)	(49,706)	($111,738,000)
Vocational-Technical Institutes/Proprietary	2,620	$ 13,449,000	1,810	$ 8,164,000
(Subtotal)	(44,798)	($100,575,000)	(47,896)	($103,574,000)
Aided Students Without Unmet Need	6,996	-0-	7,900	-0-
(Subtotal)	(37,802)	($100,575,000)	(39,996)	($103,574,000)
Non-WA Resident Aided Students	5,808	$ 25,108,000	4,307	$ 17,221,000
(Subtotal)	(31,994)	($ 75,467,000)	(35,689)	($ 86,353,000)
Unclassified, Graduate and Professional Students	1,177	$ 4,133,000	1,617	$ 5,304,000
(Subtotal)	(30,817)	($ 71,334,000)	(34,072)	($ 81,049,000)
Part-Time Students	2,894	$ 11,933,000	3,041	$ 13,449,000
(Subtotal - Full Time Resident Undergraduates)	(27,923)	($ 59,401,000)	(31,031)	($ 67,600,000)
Part-Year Students**	9,402	$ 13,908,000	10,263	$ 14,757,000
Core Group - Full-Year Students	18,487	$ 45,493,000	20,768	$ 52,843,000

* Supplementary WSLGA report indicates 1,916 students in 1982-83 received $5,147,000 in loans and 2,059 students received $5,505,000 in 1983-84. Amount of these loans not included in MAF.

**Analysis of "part-year" students reduces unmet need from $37,832,000 to $13,908,000 in 1982-83 and from $40,845,000 to $14,757,000 in 1983-84. See page 35 for discussion.

non-proprietary/VTI institutions during the entire academic year, with unmet need and who received financial aid. The structure of the entire MAF is indicated in Table I in which the number and total of unmet need of each of the groups described above is disaggregated sequentially from the grand total. The core group is shown in the outlined bottom segment.

This core group (one-fourth of the total analysis group) for whom full and reliable data were available may be likened to representing the "tip of the iceberg" in unmet need in the State of Washington in 1982-83 and 1983-84. This is an especially appropriate analogy when one considers that data on the unmet need of the remaining three-fourths of the MAF tends to be underestimated.

The Core Group: Full-time resident undergraduate students attending full year but with unmet need

In most respects, this group can be regarded as quite representative of any large population of undergraduates enrolled in different types of publicly-supported and independent institutions. In 1982-83 the core group numbered 18,487; the following year the count was 20,768. About two-thirds of both year's core group was lower division (freshman and sophomore), and the ratio of females to males ran about 55% to 45%. About three-fourths were Caucasian; the next largest ethnic group was "Asian/Pacific Island" which comprised just under 9% in both years. There were smaller percentages of Blacks, Hispanics, and American/Alaskan Natives in that order. Approximately half were in the youngest age bracket (under 22 years) in both years, one-fourth were in the next older age bracket (22-24), and nearly all the rest were between 24 and 34 years of age.

The average unmet need in 1982-83 was $2,460; the following year the average was $2,544. A major focus of interest for state planners and decision-makers is the distribution of unmet need by sector or type of college. These distributions are shown in Table II.

TABLE II. Distribution of Unmet Need by Sector, 1982-83 and 1983-84

1982-83 Unmet Need

Sector	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Doctoral	745	1324	2,056	1422	1,854	746	1,308	384	627	143	393	66	436	42	7,418	4127	$1797
Regional	675	1100	2,285	1519	1,860	770	1,269	366	615	138	859	145	386	38	7,949	4076	1950
Independent	268	508	1,082	717	1,828	732	1,959	562	2,041	457	2,496	423	1,151	129	10,825	3528	3068
Comm. Coll.	725	1332	2,300	1542	3,540	1432	3,380	982	2,112	475	3,773	611	3,471	382	19,302	6756	2857
All Schools	2,413	4264	7,723	5200	9,082	3680	7,915	2294	5,395	1213	7,520	1245	5,444	591	45,493	18487	2460

1983-84 Unmet Need

Sector	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Doctoral	701	1252	2,035	1397	2,142	879	1,719	506	975	221	766	125	348	39	8,686	4419	$1965
Regional	412	767	2,607	1683	2,822	1159	1,637	478	1,046	235	1,330	223	646	72	10,500	4617	2274
Independent	380	732	1,380	931	1,997	804	2,169	627	1,775	398	2,393	401	953	101	11,046	3994	2765
Comm. Coll.	821	1477	2,636	1756	4,170	1671	3,807	1115	2,583	586	3,989	642	4,604	491	22,610	7738	2925
All Schools	2,314	4228	8,658	5767	11,131	4513	9,332	2726	6,379	1440	8,477	1391	6,552	703	52,843	20768	2544

* N = number of students

As might be expected, the average unmet need is high for the independent sector. In these relatively high-cost colleges, the level of aid awarded is also high, but the unmet need gap remains large. It is interesting to note that the average unmet need declined for core group students in the independent sector from 1982-83, but this was mainly due to the significant increase in the reported average aid awarded between these two years (from $4,336 to $5,422). The other sectors increased their average aid for this group of students as follows between 1982-83 and 1983-84: (a) doctoral sector from $3,326 to $3,456; (b) regional institutions from $3,054 to $3,093; and (c) community colleges from $2,024 to $2,239. A further review of data for the independent sector indicates that when all student aid recipients are included, there was a slight increase in unmet need in that sector.

The most remarkable aspect of the distribution of unmet need among the sectors is the high average for the relatively low cost community colleges. As will be shown in the later analysis which profiles high-unmet need students, community colleges have a disproportionately large number of such students. In general, a substantial number of community college students differ from those in the other sectors in characteristics that are directly related to high unmet need.

The distribution of unmet need in the core group by age and sex delineates two clear patterns. As shown in Table III, females had higher average unmet need than males in all six age categories in 1982-83, and in four of the six age categories in 1983-84. Because of the preponderance of females in the core group and their higher average unmet need, a significantly greater total of unmet need for females is recorded in both years: In 1982-83, the total unmet need was $25,157,000 for females compared with $20,326,000 for males; in the following year these figures were $28,324,000 and $24,509,000 respectively.

The second pattern shows that there is a definite tendency for average unmet need to increase by age category. For both males and females in both years, there is a monotonic increase by age up to the oldest (older than 39) category. For both sexes in 1982-83, and for females in 1983-84, there is a decrease from the second oldest to the oldest category. As indicated earlier, most of the core group students

TABLE III. Unmet Need by Sex and Age, 1982-83 and 1983-84

1982-83

	Male			Female		
Age	$(000)	# Students	Average $	$(000)	# Students	Average $
≤ 22	$ 9,274	4,282	$2,166	$10,876	4,995	$2,177
22 - 24	4,918	2,254	2,181	4,479	1,929	2,321
25 - 29	3,345	1,306	2,561	4,065	1,284	3,166
30 - 34	1,484	504	2,944	2,789	774	3,603
35 - 39	696	210	3,314	1,731	409	4,232
≥ 39	610	194	3,144	1,217	342	3,558
TOTAL	$20,327	8,750	2,323	$25,157	9,733	2,585

1983-84

	Male			Female		
Age	$(000)	# Students	Average $	$(000)	# Students	Average $
≤ 22	$10,293	4,695	$2,192	$12,319	5,663	$2,175
22 - 24	5,973	2,558	2,335	5,184	2,088	2,482
25 - 29	4,009	1,491	2,689	4,152	1,356	3,061
30 - 34	1,967	601	3,272	3,217	865	3,719
35 - 39	912	253	3,604	1,640	412	3,980
≥ 39	1,355	320	4,234	1,811	463	3,911
TOTAL	$24,509	9,918	2,471	$28,324	10,847	2,611

TABLE IV. Unmet Need by Year in School and Ethnicity, 1982-83 and 1983-84

YEAR	1982-83			1983-84		
	$(000)	# Students	Average $	$(000)	# Students	Average $
Freshman	14,159	5,279	2,682	16,351	6,161	2,653
Sophomore	16,538	6,497	2,545	19,237	7,290	2,638
Junior	6,841	3,080	2,221	7,912	3,359	2,355
Senior	7,467	3,394	2,200	8,737	3,774	2,315
ETHNICITY						
Black	2,207	860	2,565	2,794	945	2,956
American/ Alaskan Nat.	1,251	433	2,889	1,638	519	3,156
Asian/Pac.	3,822	1,591	2,402	4,333	1,818	2,383
Hispanic	1,185	507	2,337	1,536	591	2,598
Caucasian	33,365	13,566	2,459	38,670	15,359	2,518
Not Ind.	3,664	1,530	2,394	3,844	1,534	2,505

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are underclassmen and younger than age 24, thus the average increases are offset by declines in number of students in the older age brackets. In the case of females, however, the proportion over 30 is almost half again greater than for men (15.6 to 10.4% in 1982-83 and 16.0 to 11.8% in 1983-84). It is in these categories where unmet need is greatest; probably due to the presence of dependent children.

Table IV shows unmet need by year in school and by ethnicity. The year in school data show a dichotomy. Lower division students in both years had a substantially higher average unmet need than juniors and seniors. The figures were quite similar within upper and lower-class divisions for both years. The major reason is the higher levels of borrowing common to upper division students.

As illustrated in Table IV, there was considerable variation in the level of unmet need among ethnic groups. In both years, the American/Alaskan Native students recorded a substantially higher level of unmet need compared with all other ethnic groups. There was, as is true for almost all cross-classifications in this study, an increase in average unmet need from 1982-83 to 1983-84. Besides American/Alaskan Natives, Black students also experienced a relatively high increase in unmet need.

The final data set shown for the core group in this analysis is displayed in Table V. It is of interest to note the changes in both source and types of student aid between 1982-83 and 1983-84. Both the federal and state sources increased their totals over the two-year span. The total from Guaranteed Student Loans also increased very significantly, by about half. The total aid provided Washington students in this category increased substantially, from 55 million to nearly 69 million dollars, and resulted more from the growth in number of awards than from the modest increase in the average size of the awards. However, as is shown in the other analyses, the average unmet need remained high and also increased.

TABLE V. Sources and Types of Student Aid, 1982-83 and 1983-84

TYPE	SOURCES											
	Federal		State		Institutional		GSL		Other		Total	
1982-83	Total $ (000)	Avg $	Total $ (000)	Avg $	Total $ (000)	Avg $	Total $ (000)	Avg $	Total $ (000)	Avg $	Total $ (000)	Avg $
Grants	17,945	971	5,786	313	3,709	201	-0-	-0-	1,340	72	28,780	1,557
Work	5,187	281	2,060	111	2,776	150	-0-	-0-	-0-	-0-	10,023	542
Loan	6,102	330	-0-	-0-	-0-	-0-	10,244	554	-0-	-0-	16,346	884
TOTAL	29,234	1,582	7,846	424	6,485	351	10,244	554	1,340	72	55,149	2,983
1983-84												
Grants	21,488	1,035	7,316	352	5,438	262	-0-	-0-	2,346	113	36,587	1,762
Work	6,156	296	2,288	110	2,047	99	-0-	-0-	-0-	-0-	10,491	505
Loan	6,850	330	-0-	-0-	-0-	-0-	14,998	722	-0-	-0-	21,854	1,052
TOTAL	34,501	1,661	9,604	462	7,485	361	14,998	722	2,346	113	68,933	3,319

Disaggregation of the Core Group Data for Further Analysis

The preliminary analysis indicated that the most powerful variable for explaining differences in distribution of unmet need among students was status as an independent or a dependent student. To be specific, the 9,463 dependent students in 1982-83 had an average unmet need of $2,116 for a total of $20,028,000; in 1983-84 the average was $2,154 with a total of $23,199,000 for the 10,770 dependent students. In contrast, the 9,024 independent students in 1982-83 averaged $2,822 of unmet need and a total of $25,465,000; the following year the 9,998 independent students averaged $2,965 and had a total of $29,644,000. On the average, the unmet need of independent students was one-third greater than that of dependents in 1982-83 and 37 percent higher in 1983-84. This disparity is discussed in more detail later in this chapter.

Because of the strong reliance on parental income in calculation of family resources (typically a strong source of contribution for dependent students and absent for independent students), analysis of family income and family contribution distributions had to be disaggregated for meaningful analysis. Tables VI and VII show the distributions of family income and family contribution separately for dependent and independent students in 1982-83 and 1983-84.

The strong relationship between distribution of unmet need and dependency status is demonstrated in Tables VI and VII to have a joint interaction with both family income and family contribution. Table VI shows that while the unmet need of dependent students is distributed fairly evenly across the family income range, that of the independent student is concentrated at the lowest family income level -- well over 90% in both 1982-83 and 1983-84. This pattern, of course, reflects the fact that for the dependent student, family income means that of his or her parents. By definition, the independent student's family income is <u>not</u> that of his or her parents. Rather, it is the student's alone plus that of his or her spouse, if any. The result is (a) much higher levels of unmet need for independent students compared with dependent students (a difference of around $700 in 1982-83 and around $800 in 1983-84), and (b) concentration of nearly all of the independent student's family income below $6000.

TABLE VI. Distribution of Unmet Need by Family Income and Dependency Status, 1982-83 and 1983-84

1982-83

Family Income	Dependent $(000)	Dependent # Students	Dependent Average $	Independent $(000)	Independent # Students	Independent Average $
0 - $ 6,000	3,951	1,605	2,461	24,029	8,484	2,832
6,000 - 8,999	1,513	642	2,357	117	52	2,250
9,000 - 11,999	1,729	775	2,231	126	49	2,571
12,000 - 14,999	2,110	943	2,237	161	55	2,927
15,000 - 17,999	1,603	872	2,068	135	53	2,547
18,000 - 23,999	3,007	1,529	1,967	249	90	2,767
24,000 - 30,000	2,527	1,321	1,913	215	83	2,590
> 30,000	3,390	1,776	1,909	433	158	2,740
TOTAL	20,028	9,463	2,116	25,465	9,024	2,822

1983-84

Family Income	Dependent $(000)	Dependent # Students	Dependent Average $	Independent $(000)	Independent # Students	Independent Average $
0 - $ 6,000	5,291	2,086	2,517	27,771	9,319	2,980
6,000 - 8,999	2,040	805	2,534	193	62	3,113
9,000 - 11,999	2,193	908	2,415	217	75	2,893
12,000 - 14,999	2,228	998	2,232	162	65	2,492
15,000 - 17,999	2,020	953	2,119	171	54	3,167
18,000 - 23,999	3,469	1,744	1,989	334	126	2,651
24,000 - 30,000	2,635	1,385	1,902	290	115	2,522
> 30,000	3,362	1,891	1,778	506	182	2,780
TOTAL	23,199	10,770	2,154	29,644	9,998	2,965

TABLE VII. Distribution of Unmet Need by Family Contribution and Dependency Status, 1982-83 and 1983-84

1982-83

Family Contribution	Dependent $(000)	Dependent # Students	Dependent Average $	Independent $(000)	Independent # Students	Independent Average $
< Zero	6,024	2,470	2,439	-0-	-0-	-0-
Zero	890	241	3,693	10,180	2,890	3,522
1 - $ 99	507	257	1,973	2,496	1,115	2,239
100 - 499	2,162	1,071	2,019	1,856	762	2,436
500 - 999	2,890	1,492	1,937	2,433	863	2,816
1,000 - 1,499	2,191	1,111	1,972	1,040	384	2,708
1,500 - 1,999	1,481	802	1,847	1,000	384	2,604
2,000 - 2,999	2,049	1,062	1,929	1,742	726	2,399
3,000 - 3,999	918	455	2,018	1,960	740	2,649
> 3,999	916	502	1,825	2,759	1,160	2,378
TOTAL	20,028	9,463	2,116	25,465	9,024	2,822

1983-84

Family Contribution	Dependent $(000)	Dependent # Students	Dependent Average $	Independent $(000)	Independent # Students	Independent Average $
< Zero	7,956	3,115	2,554	-0-	-0-	-0-
Zero	1,046	312	3,352	12,521	3,462	3,617
1 - $ 99	553	254	2,177	2,776	1,116	2,487
100 - 499	2,477	1,187	2,087	2,225	841	2,646
500 - 999	3,231	1,548	2,068	3,167	940	3,368
1,000 - 1,499	2,434	1,229	1,980	1,136	434	2,617
1,500 - 1,999	1,605	867	1,851	1,068	417	2,561
2,000 - 2,999	2,026	1,140	1,777	1,585	610	2,598
3,000 - 3,999	936	541	1,730	1,415	540	2,620
> 3,999	985	577	1,672	3,753	1,638	2,291
TOTAL	23,199	10,770	2,154	29,644	9,998	2,965

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With respect to family contribution, the interaction effect is still strong, but not as strong as for family income. Note in Table VII that, once again, levels of unmet need are considerably higher for independent students than for dependent students across the entire range of family contribution. Note further in Table VII that, in contrast to family income, the distribution of independent students is more uniform across the range of family contribution; there is still a clustering effect at the lowest range, but it is not nearly so pronounced. Comparing the distribution of dependent and independent students across the family contribution range, the former approximates more of a normal or bell-shaped curve above the lowest category in both years, while the distribution for independent students resembles an opposite curve in both years (elevated at both ends, depressed in the middle).

The "below zero" category in Table VII for dependent students is an artifact of the need analysis formulas; for the dependent student family resources can be so low that a negative contribution is quite possible. For the independent student, of course, the student is the family, so there is no transaction possible below zero since there is no "second party" involved. However, for the purpose of this study all negative family contributions were set to zero and this element has no effect on the unmet need calculations.

Analysis of Exceptionally High Unmet Need in the Core Group

The analytical approach used throughout this study was to display the distribution of unmet need according to categories of key variables such as age, ethnicity, family contribution and so forth. As the element of dependency and independency was explored it became of interest to apply a different perspective in the analysis of student characteristics. A special analysis was performed to delineate a "profile" of students with high levels of unmet need. In order to sketch this profile, all students with an unmet need of at least $4000 were separated from the core group, and the distributions of several key variables were determined. This analysis revealed that the profile of the high unmet need student was essentially similar for both 1982-83 and 1983-84. Therefore, the following description applies generally to both years.

The 6,583 high unmet need students (3,049 in 1982-83 and 3,534 in 1983-84) were not distributed equally across the institutional sectors. Nearly half (3,187) were in the community college sector. The others were distributed, in descending order, among the independent, regional and doctoral sectors. Just over two-thirds of these students were lower division, with the sophomore class being somewhat larger than the freshman class. The students with high unmet need did not differ markedly from the remainder of the core group in ethnicity, but were more predominantly female (58%), and definitely included a higher proportion of students over 25 (especially females). One-half (49.8%) of high unmet need students were 25 or older, compared with only one-fourth of the core group. But of all the variables used in developing this profile, dependency status was the most definitive. Nearly three-fourths (72.5%) of high unmet need students are independent, and the distribution of family income and contribution are consistent with their status as independent of the resources of their parents.

A summary delineation of the composite profile of the "typical" high unmet need student would suggest that she is older than 25, enrolled in a community college as a sophomore, and, as an independent student, has a low family income and receives little or no support from her parents. As will be suggested in the following analysis, it is also quite likely that she has at least one dependent child.

The above profile and other analyses of the influence of dependency status on distribution of unmet need in the core group suggested that the strong influence provided by dependency status could be enhanced by splitting the independent students into two categories. This dichotomization reflected the conviction that independent students were generally of two main types, (a) students emancipated from the parental family, usually older than the typical dependent student, but with no dependents of their own, and (b) students with the responsibility of dependent children. The latter group could be assumed to have heavy costs of child care, little prospect for additional income from employment because of the parenting responsibility, and a very substantial unmet need gap.

Two tests were made of this supposition, (a) the core group was divided into three categories: Dependent, independent with children, and independent with no children, and (b) a parallel analysis was performed for students who attended the same institution only part of the academic year. The results of the first of these analyses are discussed in the following section.

Analysis of the Core Group's Unmet Need by Dependency Status

The initial Table (No. VIII) in this section displays the remarkable power of dependency status in differentiating levels of unmet need.

Students who are in the independent status with at least one child are very sharply distinguished from the other two categories by both the average levels of unmet need and also by the distribution. The overall average for independent students with children is nearly double that for the dependent and independent with no children groups. Furthermore, while the latter two groups are concentrated at or near the lowest end of the distribution, independent students with children are skewed toward the higher ranges. The largest number for any category in both years for such students is in the $5000 - $7500 category; conversely, the smallest counts in both years (with the exception of one low category in 1983-84) are in the two lowest categories (below $2000).

It is of interest to the state's policy makers to determine the type of postsecondary institution in which the high-unmet need "Independent with children" students are enrolled. Table IX reveals strong variance in distribution of the three dependency status groups among Washington's postsecondary sectors.

The dependent students are distributed with remarkable uniformity among the four sectors, however, there is considerable variance in average levels of unmet need. As might be expected, those in the higher cost independent colleges have the highest level of unmet need in both years. Fewer of the "Independent with no children" students were in the independent colleges (there are about three times as many in the community colleges) but, like the dependent students, their unmet need levels were higher in these non-public colleges. The "Independent with children" dis-

TABLE VIII. Distribution of Unmet Need by Dependency Status, 1982-83 and 1983-84

1982-83 Unmet Need

Status	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Dependent	1,246	2097	4,791	3205	5,459	2218	3,623	1060	2,130	479	1,729	297	939	97	19,918	9453	$ 2107
Independent w/children	176	352	567	379	1,127	450	1,667	475	1,832	411	3,974	646	3,412	383	12,755	3096	4120
Independent w/o children	990	1815	2,366	1616	2,497	1012	2,625	759	1,433	323	1,817	302	1,093	111	12,820	5938	2159

1983-84 Unmet Need

Status	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Dependent	1,186	2137	5,113	3395	7,094	2883	4,858	1427	2,369	535	1,709	291	643	69	22,972	10737	$ 2139
Independent w/children	202	373	674	456	1,195	477	1,707	493	1,484	331	4,226	680	4,777	523	14,264	3333	4280
Independent w/o children	926	1718	2,871	1916	2,842	1153	2,768	806	2,526	574	2,542	420	1,132	111	15,607	6698	2330

* N = number of students

tribution is by far the most remarkable of the three groups. About 60 percent of all such students in both years were enrolled in the community colleges. It is well known that the community college student population tends to be more diverse and somewhat older than that in other types of colleges. However, these data are quite unique and valuable in showing so very clearly the concentration of high-unmet need students who are in the "Independent with children" status in these two-year "open-door" colleges. Obviously, these colleges are serving such students educationally, but is the financial aid system serving them effectively?

One would expect from the distribution shown in Table IX that this target group of high unmet need students will perforce be concentrated at the freshman and sophomore levels. Table X bears out this expectation.

At this point in the analysis, the researchers became intensely interested in the personal characteristics of the three dependency status groups. Accordingly, the final three tables in this section discussing the core group displays their distributions of ethnicity, sex and age in Tables XI, XII, and XIII, respectively.

Taken together, these tables show that the three dependency status groups are distributed quite evenly among the ethnic groups. And this is true of the uniquely interesting "Independent with children" group also; evidently this group with its exceedingly high unmet need level knows no social or ethnic barriers.

However, it is equally clear that the "Independent with children" students are more than twice as likely to be female than male, and are nearly <u>five times</u> as likely to be older than 24 years of age. Contrast the latter statistic with the distributions in Table XIII which show almost an opposite tendency for dependent students, and a strong skewing toward the under 29 year-old categories for the "Independent with no children" group. These findings are of particular policy significance in view of general trends for older females to enter (or return to) higher education and in relationship to an overall older service pattern among institutions; particularly community colleges. As we will see in the next section, it is also the "Independent with children" group which is most significantly represented in the "partial year" student category.

TABLE IX. Distribution of Unmet Need by Dependency Status and Sector, 1982-83 and 1983-84

1982-83

Sector	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Doctoral	2414	1797	239	2816	1474	1632
Regional	2059	1726	458	3354	1559	1833
Independent	2580	2898	201	4358	747	3310
Comm. Coll.	2400	1895	2198	4399	2158	2355

1983-84

Sector	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Doctoral	2691	1918	239	3439	1489	1815
Regional	2424	2029	490	3843	1703	2173
Independent	2894	2551	229	4472	871	3030
Comm. Coll.	2728	2020	2375	4436	2635	2492

TABLE X. Distribution of Unmet Need by Dependency Status and Year in School, 1982-83 and 1983-84

1982-83

Year In School	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Freshman	3363	2191	926	4630	990	2528
Sophomore	3174	1984	1484	4162	1839	2208
Junior	1594	2145	302	3440	1184	2013
Senior	1322	2140	384	3260	1925	2012

1983-84

Year In School	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Freshman	3799	2156	1029	4476	1333	2665
Sophomore	3565	2080	1562	4351	2163	2324
Junior	1826	2183	328	3768	1205	2232
Senior	1547	2185	414	3923	1997	2172

TABLE XI. Distribution of Unmet Need by Dependency Status and Ethnicity, 1982-83 and 1983-84

1982-83

Ethnicity	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Black	393	2280	176	3886	291	2158
American/ Alaskan Native	146	2205	143	4056	144	2424
Asian/Pac. Isl.	734	2053	210	4614	647	2080
Hispanic	263	1928	102	3490	142	2268
Caucasian	7218	2122	2276	4076	4072	2171

1983-84

Ethnicity	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Black	385	2135	204	4664	356	2924
American/ Alaskan Native	187	2160	176	4824	155	2468
Asian/Pac. Isl.	852	2187	178	4702	788	2072
Hispanic	318	2230	110	3891	163	2454
Caucasian	8228	2128	2506	4182	4622	2310

TABLE XII. Distribution of Unmet Need by Dependency Status and Sex, 1982-83 and 1983-84

1982-83

Sex	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Male	4524	2126	937	4005	3289	2114
Female	4927	2090	2158	4168	2648	2215

1983-84

Sex	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Male	5091	2170	1039	4540	3788	2308
Female	5645	2112	2293	4163	2909	2357

TABLE XIII. Distribution of Unmet Need by Dependency Status and Age, 1982-83 and 1983-84

1982-83

Age	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
< 22	7611	2099	193	4420	1475	2251
22 - 24	1637	2115	378	2823	2168	2070
25 - 29	150	2380	957	4053	1484	2140
30 - 34	22	1909	772	4119	484	2173
35 - 39	18	3055	457	4374	144	2597
> 39	15	1533	339	4136	183	2235

1983-84

Age	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
< 22	8522	2113	156	4513	1680	2324
22 - 24	1918	2227	412	4175	2317	2230
25 - 29	212	2269	1019	4012	1616	2223
30 - 34	34	2265	898	4230	535	2460
35 - 39	< 10	-	461	4566	198	2177
> 39	44	2750	387	4777	352	3398

Resident Undergraduates Who Did Not Receive Aid for the Full School Year (Partial Year Students)

This group represents approximately one-third of the total full-time resident undergraduates receiving student financial aid who had remaining unmet need (in 1982-83, 9,402 of 27,923 students, or 33.7%, and in 1983-84, 10,268 of 31,031 students, or 33.1%). These students did not receive financial aid for the full school year. It is not known from the data which are available whether these students actually attended for less than a school year or which terms they attended. The data base indicates only the number of terms in which financial aid was provided and used. However, in view of the high average unmet need of this group (even on the adjusted basis which will be discussed shortly) it is likely that most of these individuals did not complete the full school year. Therefore, in further discussions we will use the shorthand "terms attended" in lieu of "terms in which aid was received."

The unmet need of this group presents one of the more difficult elements of this analysis since it can be logically defined and expressed in two ways: First, if one assumes that all of the students in this group planned to attend a full school year, maintained good academic standing and that the only reason for not receiving a full year's financial aid was because of inadequate student aid, then (a) need and individual/family resources should be calculated on a full year basis and (b) the partial year financial aid should be deducted from total need to determine unmet need. On the other hand, if one assumes that all of the students in this group dropped out or stopped receiving financial aid for nonfinancial reasons, (e.g., poor academic standing, personal choices, etc.) then (a) need and individual/family resources should be calculated only for the period aid was received and (b) the partial year financial aid should be deducted to determine unmet need. For the purpose of this analysis, the most conservative approach (the second alternative) was selected. In this process, student costs and family contribution amounts were reduced by two-thirds if a student received aid in only one academic quarter, reduced by one-half if aid was granted in only one semester, and by one-third if received for two academic quarters.

The following is a comparison of the two approaches to calculation of unmet need:

TOTAL	1982-83 Unmet Need	1983-84 Unmet Need
Full Year Calculation	$37,832,000	$40,845,000
Partial Year Calculation	13,908,000	14,757,000
Difference	($23,924,000)	($26,088,000)
PER STUDENT		
Full Year Calculation	$ 4,011	$ 3,980
Partial Year Calculation	1,479*	1,438*
Difference	($ 2,532)	($ 2,542)

* When students whose need was fully met or whose aid exceeded the artificially recalculated "need" are excluded, the average unmet need was $1,740 in 1982-83 and $1,705 in 1983-84.

Both the data and the nature of the assumptions indicate that both of the calculations are wrong to some degree. The truth evidently lies between the two extremes. The fact that the arbitrary recalculation placed a substantial number of these students into an apparent over-award status is a clear indication of the conservative nature of the "partial year assumption." In this context then, the extent of the unmet need of this group is between $14.8 and $40.8 million in 1983-84. Further review is needed to establish more specific assumptions about this group and the extent to which unmet need affects their ability to stay in school.

On a preliminary basis, it is evident that the degree of unmet need for this group is greater -- for the terms they did receive aid -- than those who persisted through the year. By calculating the total need of partial year students using both the full year and partial year methods discussed above and contrasting the results, we can determine that the average partial year student attended 50 percent of the school year, e.g., one semester or one and one-half quarters. Two calculations, one of the whole group and one of the subset of independent students with children were made for 1982-83. Both were within one percent of the 50 percent relationship (49.7 and 50.8 percents). Using the 50 percent attendance with aid assumption, the 1982-83 unmet need of the partial year students

was 20 percent greater than those receiving aid the full year. In 1983-84, the disparity was somewhat less (13 percent).*

It is interesting to note that the reduction in the aid disparity parallels a modest reduction in the proportion of aided undergraduate residents receiving aid for a partial year (33.7% in 1982-83 to 33.1% in 1983-84). While certainly not conclusive, this relationship provides some indication that more adequate student aid assists in retention.

As in the case of the core group, a further review was conducted of the three subcategories: dependent students, independent students with children, and independent students without children. As is shown in Table XIV, the group most greatly affected by high unmet need are independent students with children. In addition, these individuals have a substantially (about 10 percent) higher unmet need than their counterparts who attended the full year. It is significant that this group demonstrates the lowest persistence (when measured by the number of terms in which aid was received) of any of the groups studied. Only 55 percent of the 6,080 aided undergraduate residents with children received aid the full year. This compares with 65% of independent students without children and 74% of dependent students.

A parallel analysis with the core group was performed with the partial year students, but in accordance with the focus in this report on the core group, the tables displaying the unmet need of the partial year group, cross-classified by key variables, are included as Appendix Two. These tables show the distribution of unmet need by dependency status separately by institutional sector, year in school, ethnicity, sex and age, respectively and parallel Tables IX through XIII.

In general, the partial year students tended to be substantially older than the core group. In addition, there was a slightly higher percent of females, minorities, and lower division students in the partial year group than is reflected in those attending for the full year. Overall, aside from the factors of high unmet need and the existence of children previously noted, the largest descriptor of partial year recipients was attendance at

* Calculated Full Year Equivalent Average Unmet Need
1982-83 Partial Year $2957, Full Year $2460
1983-84 Partial Year $2876, Full Year $2544

TABLE XIV. Distribution of Unmet Need by Dependency Status, 1982-83 and 1983-84, Partial Year Students

1982-83 Unmet Need

Status	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Dependent	669	1750	1,366	951	837	361	226	68	138	31	171	29	17	2	3,424	3182	$ 1076
Independent w/children	196	606	890	608	1,685	678	942	279	969	215	1,253	213	103	12	6,039	2611	2313
Independent w/o children	620	1802	1,432	1050	1,260	526	284	83	348	77	273	47	223	24	4,440	3609	1230

1983-84 Unmet Need

Status	$1000 - Under		$1001 - 2000		$2001 - 3000		$3001 - 4000		$4001 - 5000		$5001 - 7500		Above 7500		ALL		AVERAGE
	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	$(000)	N*	
Dependent	809	2172	1,573	1104	945	297	329	97	118	27	80	14	17	2	3,871	3813	$ 1015
Independent w/children	261	713	893	615	1,628	656	1,051	307	812	179	1,511	251	230	26	6,387	2747	2325
Independent w/o children	622	1834	1,470	1050	1,493	605	404	118	268	59	159	28	83	9	4,499	3703	1215

* N = number of students

a community college. Of the total full time students receiving financial aid, 45 percent attended community colleges. However, only 37 percent of the core group (students aided for the full year) attended community colleges while 60 percent of the partial year group were community college students. As in the case of the core group, the most policy sensitive group within the partial year students are older students, predominantly female, attempting to start or continue their education in a community college.

4. SUMMARY

Prior to this study, the Council had already established the existence of a substantial gap between the total financial resources (including financial aid from all sources) available to students and the total amount needed to meet college costs. This gap is termed unmet need. The present study was designed to determine the components of that gap, the difference among students in the amount of unmet need, the characteristics of students at differing levels of unmet need, and the relationships among variables that seem associated with such differences.

Due to decreases in federal support of student financial aid (about 20 percent in 1980 adjusted dollars over the past four years), and the prospect of further, possibly steeper, declines, the growth of unmet need becomes a crucial factor in planning and management of postsecondary enrollment patterns in Washington. The Council therefore initiated and supported what is probably the most thorough large-scale study of unmet need at the state level conducted to date.

The study staff adopted a very conservative approach to the data, and focused intensive analytical efforts on only that portion of the total data sets which comprised completely reliable information about student finances which also had significant policy implications. The students for whom such data were available were resident full-time undergraduates attending the same institution for the full school year. These were termed the "core group" of whom there were 18,487 in 1982-83 and 20,768 in 1983-84. The total amount of unmet need for these students was $45,493,000 and $52,843,000, respectively for an annual per student average of approximately $2500. That this approach was most conservative is underscored by comparison with the total set of student records available for analysis in each of these two years: In 1982-83 there were 73,373 applicants or students with a total of $266,390,000 unmet need; the following year 76,462 applicants or students had a total of $277,645,000 unmet need. The core group thus represents only the "tip" of the unmet need "iceberg."

Painstaking analysis of the core group data yielded many interesting and significant findings. Among the most salient of these are the following:

1. *Unmet need represents a large and growing gap between costs and resources for an increasing number of postsecondary students in Washington.*

2. *Unmet need is by no means spread uniformly among students. For some students the gap is so large that it can be logically surmised to be a deterrent to timely completion of programs, the ability to stay in school, or to return if discontinuance is necessary.*

3. *The notable variance in background characteristics of students according to differing levels of unmet need suggest that targeting of ameliorative strategies could effectively offset the worst effects of unmet need. This study went far in identifying the types of students who seem to be impacted most severely.*

Additional research was conducted on the group most closely related to the core group; resident full-time undergraduates not completing the academic year. It was found that this group had a somewhat higher level of unmet need, was older and consisted of a higher proportion of females, minorities, and community college students than the core group. This analysis indicates that consideration of special targeting strategies to address the "stop-out" or "drop-out" phenomenon is warranted.

As documented in this report, the study yielded many highly significant findings, several of which suggest possible policy responses by state government. Indeed, the study was successful in providing data useful to decision-makers. But, as with any intensive research effort on a complex social and economic phenomenon, the effort uncovers not only useful and definitive findings, it also reveals additional intriguing avenues for further, perhaps even more significant research.

For example, and perhaps of even more pointed policy significance, the study could not encompass analysis of an extremely important group,

namely, those who applied for aid but for whom no aid was reported. Who are they? Why did they not receive aid? Was it because they were prevented from even enrolling in a Washington college or university because of an extensive unmet need gap? In-depth analysis needs to be conducted on this group.

Similarly, in regard to those who only attended part of an academic year, was their personal unmet need gap a reason, or perhaps the main reason, for their inability to complete the full year? For how many, and what kinds of students, was this true? To what extent were academic and personal, non-financial, factors involved?

In addition, for those students completing the year, what strategies did they use to cope with unmet financial need? What effect, if any, did it have on choice of academic field or ability to continue in future years? Although the two-year span of data (1982-83 and 1983-84) allowed only very limited trend analyses, the following topics are of future research interest: (a) Down-shift: Do students with high levels of unmet needs shift to a lower cost institution significantly more than others? (b) To what extent does unmet need vary over time by socio-economic background; do students from the lower-middle income levels have higher levels of unmet need because of lowered packaging and higher eligibility requirements as compared to high need, low-income students? Do shifts to independent status occur among high need students more often than among low-need students?

It would be tempting to reach specific conclusions solely on the basis of this review. However, all of those involved in this study are aware that further follow-up analysis is needed to determine the extent to which the provision of adequate student aid would affect an apparent heavy stop- or drop-out pattern among certain groups of students. Of immediate concern are individuals with dependent children; primarily older female students. The study clearly demonstrates that special needs exist in this area and that none of the existing student financial aid programs makes special provision for the unique needs of this group.

APPENDIX ONE

TECHNICAL NOTE

This Note describes the technical processes and definitions used in developing the Master Analysis File (MAF).

Data File Creation.

As indicated in Chapter Two, the sources of data for the MAF were the Council for Postsecondary Education's Unit Record Report (URR) and the College Scholarship Service (CSS) data tape containing information supplied by applicants (both Washington residents and non-residents) for financial aid at Washington institutions. Table A (attached) reflects the record layout of the MAF.

The MAF was created using a COBOL program. The two input files, CSS data and URR data, were compared. If a match, based on social security number (SSN) was encountered, both input records were used to construct the MAF. If a match was not encountered, the record with the lowest SSN was written to the MAF, a new record read in, and another comparison made. The MAF, therefore, contains records with only URR data, only CSS data, and matched CSS and URR data.

The following are descriptions of key indicators used in the determination of Financial Need and Unmet Need:

Total Costs: Total costs are the total institutional tuition and fees for the nine month academic year and an institutional maintenance budget for living expenses, books, and so forth. For the student who attended a Washington institution full-time for the full academic year and received aid, these calculations were rather straightforward derivations from existing data sources. First, the URR institutional codes were matched to tuition and fee schedules for the student's institution and level of enrollment (e.g., undergraduate, graduate, professional). Then standardized allowances for student expenses under the various possible living arrangements were built in. Living arrangements were a function of two factors: Living with parents versus living on campus or in off-campus housing. The number of people dependent upon the student

was added as the final ingredient necessary for computing the living arrangements costs. In summary, the necessary ingredients for computing total costs were: (1) the institutional tuition and fees for the level of enrollment, (2) the number of dependents, (3) whether or not the student was living with parents, and (4) the nine month maintenance budget fitting these circumstances. When the student had no URR data, total costs were computed using first choice institution data and stated intentions concerning living arrangements. Sample 1983-84 budgets for a single, full-time, resident student, living on campus or in an apartment were:

	State University	Private University	Community College
Tuition & Fees	$1,308	$5,664	$ 581
Room and Board	2,505	2,505	2,505
Books and Supplies	350	350	350
Personal Expense (includes medical and dental)	975	975	975
Transportation	700	700	700
TOTAL	$5,838	$10,194	$5,111

In the case of less than full time students, a separate review determined that the great majority receiving financial aid were enrolled for nine or more hours but less than twelve. Since, at most public institutions in Washington, full fees are assessed at ten hours, full tuition was assumed. When a student was apparently enrolled for less than a full year, a special data manipulation was necessary. That process is described in Chapter 3.

Student Resources: The calculation of student resources assumed a zero level of summer savings as opposed to any level assigned by an aid officer or by CSS calculations. The student's contribution used in the study was the sum of the student's contribution from income and the student's contribution from assets as computed according to the Uniform Methodology system of needs analysis as reported on the CSS Financial Aid Form Needs Analysis Report (FAFNAR). In all other aspects, the calculation of student resources was identical to that represented on the URR.

Parental Contribution: The study allowed no negative parental contributions to be employed. All negatives on this item were set to zero. In all other aspects, the expected parental contribution data will be identical to that reported on the FAFNAR; if FAFNAR data were not available, the parent contribution figure from the URR was used.

Non-aided Students with less than $200 of Need: Students in the MAF with only CSS data (no URR data) who had a calculated need of less than $200 were excluded from further analysis in the study.

Total Student Aid: This data item was constructed from available URR data items which provided the aid received by students by each program. For those students having no URR data, Total Aid was set to zero.

Unmet Need: Once the above calculations were made, the calculation of raw unmet need was straightforward, following Formula II. The study employed two indicators of unmet need, however. Raw unmet need is as described in Formula II. A revised unmet need indicator was constructed also, however, to facilitate certain calculations and data presentations. The revised indicator was constructed setting all negative raw unmet need values to zero. This manipulation served two purposes. First, it facilitated straightforward data presentation on a complex public policy topic. In some instances, the revised indicator was superior to the raw indicator in discussing significant financing issues. Second, it allowed superior calculation of ratio and proportions. Two indicators that were constructed and used in the analysis were the proportions of Total Need and Total Costs taken up by (revised) unmet need.

Merging the Files to Ensure Discrete Data: As described briefly in Chapter Two, a match and merge routine was followed to ensure that there were no exact duplicate records and that all records on either or both the URR and the CSS tapes were included. Social Security numbers were used to match and merge. It was assumed, however, that there would be duplicate social security numbers but different institutional codes as well as aid received information. In this case, the duplicate social security numbers with different following data were retained in the URR file. For duplicate student files in the CSS file, a check was made to see if the particular file was revised, and, if so, the latest revised file was used and the

original, or earlier revision, was deleted. When the URR and CSS files were merged, duplicate social security numbers occurred only if the student received aid from two different institutions. If such was the case, a check was made to see if the total number of terms aided from all institutions was greater than four quarters or three semesters, or the equivalent. If that were the case, the particular student record was printed to an error file and reviewed. In all other cases, the tuition and fees for the particular institution attended was computed based on the number of terms aid was received at that institution.

File Specification:

CSS - Record length = 1880

Records were sorted by social security number in ascending order. Storage medium - magnetic tape.

URR - Record length = 120

Records were sorted by social security number in ascending order. Storage medium - 3380 disk with back-up on magnetic tape.

MAF - Record length = 255

Storage medium - 3380 disk with back-up on magnetic tape.

TABLE A.

GEN OP1 02

RECORD LAYOUT WORKSHEET

SYSTEM: FAMIS
PROGRAM NAME: MAF
PROGRAMMER: T Jons
DATE: 24 Sept 84
PAGE 1 OF 2 PAGES

| | | |

APPENDIX TWO

APPENDIX TABLE A.

Distribution of Unmet Need by Dependency Status and Sector, 1982-83 and 1983-84, Partial Year Students

1982-83

Sector	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Doctoral	712	1024	104	1500	542	934
Regional	553	929	252	1682	705	1130
Independent	353	1382	71	2324	229	1633
Comm. Coll.	1564	1082	2184	2424	2133	1296

1983-84

Sector	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Doctoral	881	726	94	1521	520	871
Regional	773	1052	270	2393	763	1202
Independent	395	1367	85	2376	267	1689
Comm. Coll.	1878	1064	2298	2348	2153	1244

C.F. Table IA.

APPENDIX TABLE B.

Distribution of Unmet Need by Dependency Status and Year in School, 1982-83 and 1983-84, Partial Year Students

1982-83

Year In School	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Freshman	1531	1098	1488	2438	1427	1322
Sophomore	924	1021	823	2350	1056	1199
Junior	350	1154	131	1595	368	1231
Senior	377	1050	169	1586	758	1103

1983-84

Year In School	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Freshman	1805	1094	1683	2358	1564	1293
Sophomore	1019	980	755	2350	1014	1169
Junior	459	865	141	2383	397	1113
Senior	530	945	168	1833	728	1165

C.F. Table K.

APPENDIX TABLE C.

Distribution of Unmet Need by Dependency Status and Ethnicity, 1982-83 and 1983-84, Partial Year Students

1982-83

Ethnicity	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Black	222	1122	203	2148	254	1378
American/ Alaskan Native	68	1074	164	2390	143	1133
Asian/Pac. Isl.	243	1156	156	2615	390	1126
Hispanic	105	1333	67	2507	87	1310
Caucasian	2257	1054	1805	2258	2386	1222

1983-84

Ethnicity	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Black	209	1121	183	2148	226	1239
American/ Alaskan Native	132	1106	177	2780	149	1309
Asian/Pac. Isl.	292	1202	107	3056	396	1184
Hispanic	140	1121	78	2487	101	1148
Caucasian	2797	989	2054	2237	2543	1213

C.F. Table XI.

APPENDIX TABLE D.

Distribution of Unmet Need by Dependency Status and Sex, 1982-83 and 1983-84, Partial Year Students.

1982-83

Sex	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Male	1601	1118	717	2212	2062	1193
Female	1578	1034	1885	2346	1540	1277

1983-84

Sex	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
Male	1977	1021	701	2337	2104	1205
Female	1836	1009	2044	2317	1598	1228

C.F. Table XII.

APPENDIX TABLE E.

Distribution of Unmet Need by Dependency Status and Age, 1982-83 and 1983-84, Partial Year Students

1982-83

Age	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
< 22	2483	1087	191	2304	805	1365
22 - 24	536	985	391	2261	1111	1190
25 - 29	115	1148	785	2117	963	1144
30 - 34	24	1458	619	2409	384	1211
35 - 39	5	2000	353	2586	132	1295
> 39	19	947	272	2382	214	1313

1983-84

Age	Dependent # Students	Dependent Avg $	Independent w/children # Students	Independent w/children Avg $	Independent w/o children # Students	Independent w/o children Avg $
< 22	2887	1036	196	2005	832	1293
22 - 24	743	1010	411	2251	1095	1188
25 - 29	131	1084	802	2263	998	1133
30 - 34	25	1060	655	2296	393	1178
35 - 39	8	1500	377	2599	177	1243
> 39	19	895	316	2500	208	1487

C.F. Table XIII.

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